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10/517,476	12/07/2004	Alois Dehlink	AT 020033	6126

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EXAMINER
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RICHEY, SCOTT M

ART UNIT	PAPER NUMBER
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2877

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/517,476	<b>Applicant(s)</b> DEHLINK, ALOIS	
	<b>Examiner</b> Scott M. Richey	<b>Art Unit</b> 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 August 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 07 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Objections*

Claim 1 is objected to because of the following informalities:

The claims are objected to because the lines are crowded too closely together, making reading difficult. Substitute claims with lines one and one-half or double-spaced on good quality paper are required, 37 CFR 1.52(b).

Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation, 37 CFR 1.75(i), MPEP 608.01(m).

The present Office practice is to insist that each claim must be the object of a sentence starting with "I (or we) claim," "The invention claimed is" (or the equivalent).

The applicant is further reminded of the proper form of the claims, set forth in 37 CFR 1.75 (e)

Where the nature of the case admits, as in the case of an improvement, any independent claim should contain in the following order:

- (1) **A preamble** comprising a general description of all the elements or steps of the claimed combination, which are conventional or known,
- (2) **A phrase** such as "wherein the improvement comprises, " and
- (3) **Those elements**, steps, and /or relationships, which constitute that portion of the claimed combination which the applicant considers as the new or improved portion.

Claim 1 recites the limitation "the image" in line four. There is insufficient antecedent basis for this limitation in the claim.

Numerous minor errors have been found in the claims. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification or claims.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1-3 and 5-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 states: "one other optically active element," in the third line. The term *other* implies a first instance. There is insufficient antecedent basis for this limitation in the claim. For the purposes of examination, the claim is construed as, "one optically active element."

Claim 2 states: "as optically active elements the hardware unit contains at least..." It is unclear if the limitation intends that the hardware unit is optically active elements, or if the structural limitations following the hardware unit are optically active. If the latter, the claim would not be enabled by the disclosure, and would be rejected under 35 U.S.C. 112, first paragraph, because what is intended by optically active hardware optics and prisms is not described in the disclosure so as to enable one of ordinary skill in the art to reproduce the invention. As interpreted by the examiner from

the specification, for the purposes of applying art, the claim is construed to intend that only the displays are optically active.

Regarding claims 1, 3, and 5-7, apparatus claims must be structurally distinguishable from the prior art. Limitations following "adapted for," "designed to," and "can be" are not positive limitations, being optionally included, and thus are indefinite. These limitations are not given patentable weight. Specifically, these occur in:

- Claim 1 – "which can be lit by a first color beam," "that can be emitted by the hardware unit," "to which the projection beam can be fed and which are designed to emit test image information suitable for assessing the positioning of the display," "which is designed to focus on individual pixels in the first display."

- Claim 2 – "that can be lit by a second color beam," "designed to recombine the first color beam and the second color beam and to emit the projection beam," "designed to position at least the first display and the second display in relation to one another and in relation to the other optically active elements, in order to project the images generated by the two displays congruently in the plane of projection."

- Claim 3 – "being capable of focusing on pixels arranged in one of the four corners of the first display and possibly of the second display."

- Claim 5 – "can be pressed against reference positions by means of positioning pins, in order to position the first display in a starting position for the subsequent positioning operation."

- Claim 6 – "which is designed for adjusting the position of the first display along and about the three spatial axes, the positioning device being designed, when the

first display is rotated about one spatial axis, to compensate for a displacement of the displays along the other two spatial axes.”

- Claim 7 – “can be fed from the optical means and which are designed to automatically detect control information for controlling the holding means.”

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-3, 5-9, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Okuyama et al. (US 6,031,587) hereinafter “Okuyama.”**

Okuyama discloses an apparatus in figures 2 and 3, comprising:

(Claim 1) a positioning device to position at least a first display of a hardware unit, which can be lit by a first color beam, in relation to at least one other optically active element of the hardware unit, in order to project the image generated by at least one display by projecting a projection beam that can be emitted by the hardware unit in a plane of projection (Fig.2), having holding means for holding at least the first display during a positioning operation and a subsequent operation to fix the positioned display (col.5, ln.65-67), and having optical means to which the projection beam can be fed and which are designed to emit test image information suitable for assessing the positioning of the display (Fig.2), and having control means for controlling the holding means in

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order to adjust the position of the first display in relation to the other optically active elements during the positioning operation (STEP2 and STEP3; col.5, ln.41-49), and having fixing means for permanently fixing the positioned first display during the fixing operation (Fig.3, STEP4), characterized in that the optical means contain at least a first telescopic optical system, which is designed to focus on individual pixels in the first display (Fig.1, 1);

(Claim 2) characterized in that as optically active elements the hardware unit contains at least a second display that can be lit by a second color beam (24, 25, 26), hardware optics and a recombination prism designed to recombine the first color beam and the second color beam and to emit the projection beam (20; 21, 22, 23), and in that in the positioning operation the positioning device is designed to position at least the first display and the second display in relation to one another and in relation to the other optically active elements (STEP2, STEP3, STEP7, STEP8, STEP9... The individual adjustments adjusts each panel relative to the other panels, as can be seen in Fig.2.), in order to project the images generated by the two displays congruently in the plane of projection (to and through element 1);

(Claim 3) characterized in that the optical means also contain a second, a third and a fourth telescopic optical system, one telescopic optical system in each case being capable of focusing on pixels arranged in one of the four corners of the first display and possibly of the second display (Element 1 contains at least four telescopic optical systems capable of focusing on the pixel arrangement.);

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(Claim 5) characterized in that the holding means for the first display have a loading device, in which during a loading operation the first display can be pressed against reference positions by means of positioning pins, in order to position the first display in a starting position for the subsequent positioning operation (2; Fig.7, 25-27; projector, col.1, ln.8-10);

(Claim 6) characterized in that the holding means have a positioning table, which is designed for adjusting the position of the first display along and about the three spatial axes, the positioning device being designed, when the first display is rotated about one spatial axis, to compensate for a displacement of the displays along the other two spatial axes (2; Fig.7, 25-27; Fig.4; col.5, ln.41-49; col.6, ln.34-40);

(Claim 7) characterized in that feedback control means are provided, to which the test image information suitable for assessing the positioning of the displays can be fed from the optical means and which are designed to automatically detect control information for controlling the holding means (col.5, ln.41-55; Fig.5, 42); and

(Claim 8) characterized in that the optical means contain the hardware optics of the hardware unit, the hardware optics also being contained in a finished projector containing the hardware unit (col.1, ln.8-10).

As to claims 9 and 11, Okuyama discloses a positioning method for the positioning of at least a first display of a hardware unit, which can be lit by first color beam, in relation to at least one other optically active element of the hardware unit, in order to project the image generated by at least one display by projecting a projection



beam that can be emitted by the hardware unit in a plane of projection, said method involving the following stages:

(Claim 9) holding at least the first display during a positioning operation and a subsequent operation to fix the positioned display (Fig.8, STEP101); delivery of the projection beam to at least one telescopic optical system, which is designed to focus on individual pixels in the first display and which emits test image information suitable for assessing the positioning of the display (107); controlling the holding means, in order to adjust the position of the first display in relation to the other optically active elements during the positioning operation (inherent, If the holding means were not controlled, the panel could not be adjusted in STEP108, STEP109. col.5, ln.41-49); permanent fixing of the positioned first display during the fixing operation (STEP118); and

(Claim 11) characterized in that in the positioning, the position of the first display is adjustable along and about the three spatial axes, where a displacement of the display along the other two spatial axes that occurs when rotating the first display about one spatial axis is automatically compensated for (Fig.4; col.6, ln.34-40).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okuyama, as applied to claim 2 above, in view of Clarke (US 5,422,715).**

Okuyama is silent to the light source comprising a light emitting diode (LED). In a device for determining three-dimensional location and orientation, Clarke teaches a means of illumination comprising a light emitting diode to achieve "rapid changes in output." Further, it is well known in the art that LED's are beneficial in LCD displays because of crystal response rates. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of invention to use the LED of Clarke within the apparatus of Okuyama to achieve illumination capable of rapid changes.

**Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okuyama, as applied to claim 9 above.**

Okuyama is silent in that during a loading operation the first display is pressed against reference positions by means of positioning pins, in order to position the first display in a starting position for the subsequent positioning operation. It is well known in the art to use positioning pins to properly align wafers quickly and efficiently without measuring steps. For example, see Mizutani et al. and Fujimori et al.

### ***Conclusion***

Several facts have been relied upon from the personal knowledge of the examiner. Applicant must seasonably challenge well known statements and statements based on personal knowledge when they are made by the Board of Patent Appeals and Interferences. In re Selmi, 156 F.2d 96, 70 USPQ 197 (CCPA 1946); In re Fischer, 125 F.2d 725, 52 USPQ 473 (CCPA 1942). See also In re Boon, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of judicial notice must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice). If applicant does not seasonably traverse the well-known statement during examination, then the object of the well-known statement is taken to be admitted prior art. In re Chevenard, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). A seasonable challenge constitutes a demand for evidence made as

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soon as practicable during prosecution. Thus, applicant is charged with rebutting the well-known statement in the next reply after the Office action in which the well-known statement was made.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott M. Richey whose telephone number is (571) 270-1296. The examiner can normally be reached on Monday - Thursday, 10:00 - 17:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on (571) 272-2059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Scott M. Richey  
Patent Examiner  
Art Unit 2877



LAYLA G. LAUCHMAN  
PRIMARY EXAMINER